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EXAMINER

SHERR, CRISTINA O

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/923,615

Applicant(s)

KING ET AL.

Examiner

Cristina Owen Sherr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,6-10,12,13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 6-10, 12-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This communication is in response to applicant's amendment filed March 24, 2006. Claims 1, 4, and 10 are currently amended. Claims 3, 5, 11, and 14 have been canceled. Claims 1-2, 4, 6-10, 12-13 and 15-18 are currently pending in this case.

#### ***Response to Arguments***

2. Applicant's arguments filed March 24, 2006 have been fully considered but they are not persuasive.

3. With regard to claims 1 and 10 applicant argues that nothing in the cited references discloses a placing a separate barcode on different pages of a document. Houser et al (US 5,606,609), however, refers to "multiple security documents may be embedded in a single electronic document" (col 7 ln 60-65). Houser further refers to a water mark including "number of characters per page (col 19 ln 6-8). On the one hand, what would be the point of having a multiple page document with multiple barcodes of watermarks all on one page? On the other hand, it is obvious that multiple barcodes or watermarks based on, *inter alia*, the number of characters on a page are meant to be placed on different pages.

4. Applicant further argues, with respect to claim 4 and 13 that It would not be obvious, based on the cited references to base a barcode on a document revision number. Examiner respectfully disagrees. Please note the many examples of numbers or items on which to base a barcode or security object in Houser.:

The content of the security object may vary depending on the information required by the features provided. For example, the security object may include a document digest that includes one or more data items that characterize the electronic document at the time the security object is embedded. For example, the document digest may include

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document file name, document file path, the number of characters per page or in the document, the date and time that the document was saved, a checksum value, the number of pages in the document, a hash value of the entire document, a hash value of the printed characters of the document, other document specific information, or any combination of the above. The hash value may be computed, for example, using the Secure Hash Standard adopted by NIST.

The security object may include, in addition or in the alternative, a signature digest including one or more data items which identify the signator and/or characterize or relate to the instance of the embedded security object. For example, the signature digest may include the signator's name, other information specific to the signator such as local access network (LAN) user name, LAN subdirectory specification or an Internet address, system identification, the date and time of that the security object is embedded, a serial number assigned to the instance of the embedded security object, information identifying the version of the electronic document security application, the signator's comments, information relating to the generation of time-varying data, other information relating to the security object embedding event, or any combination thereof. In addition, the security object may include the electronic chop." (col 12 ln 41 – col 13 ln3).

5. It would be obvious to one of ordinary skill in the art that you can base a barcode on anything you want.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 4, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houser et al, U.S. Patent No. 5,606,609 in view of Henderson et al, U.S. Patent Application Publication No. US 2002/0188845 A1 and Millard et al, U.S. Patent Application Publication No. US 2002/0007335 A1.

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8. As per Claims 1 and 10 –

Houser et al disclose an electronic document management system for verifying the contents of an electronic document exchanged through a network, said contents defining said electronic document and comprising a predetermined electronic form template and variable data input by a user into said predetermined electronic form template, said system comprising:

(a) at least one data storage means (Figure 1, 7A; Col. 7, lines 22-28; Col. 7 line 65-Cal. 8 line 2; Col. 8, lines 33-40);

(b) a data capturing component for capturing user-input variable data defining an electronic document, wherein said data comprises at least said variable data, and thereafter, forwarding said validated user-input variable data to said storage means for storage thereby (Figure 1; Col. 7, lines 15-28; Col. 7, lines 60-65; Col. 11, lines 52-61; Col. 15, lines 20-25);

(c) a document digest generator for generating a unique document digest from said stored validated user-input variable data and said template defining said electronic document by applying a secure algorithm thereto, whereby said document digest is uniquely associated with said defined electronic document, and forwarding said document digest to the storage means for storage in association with said defined electronic document (Col. 4, lines 10-33; Col. 7, lines 60-65; Col. 10, lines 60-65; Col. 12, lines 40-54; Col. 14, lines 10-20 and 30-35; Col. 15, lines 20-25);

(d) a barcode generator for generating for each page of said electronic document a unique barcode associated with that page based on paging details identifying that said

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page (such as number of pages or number of characters per page) and said document digest wherein multiple said unique barcodes are generated where said electronic document comprises multiple pages, with one unique barcode being generated for and associated with each page of said multiple pages (Col. 12, lines 40-55; Col. 16, lines 62-67; Col. 17, lines 1-14; Col. 18 line 57-Col. 19 line 8; Figure 8) ;

(e) a document forwarding component for forwarding said defined electronic document with said unique barcodes added to said pages of said electronic document associated therewith for use by a user (Col. 7 line 63-Col. 8 line 10; Col. 8, lines 35-40; Col. 15,,lines 20-25);

(f) a document receiving component for receiving from a user a signed electronic document comprising variable data and a barcode for each page of the document (Col. 4, lines 20-34; Col. 7 line 60 Col. 8 line 2; Col. 15, lines 25-28); and,

(g) a barcode verification component for determining the validity of each said barcode of said received electronic document wherein said document digest component of said barcode is compared to said stored document digest associated with said defined electronic document (Col. 4,lines 20-34; Col.11, lines 45-50; Col. 15, lines 37-45; Col. 16, lines 2-38; Col. 21, lines 37-48).

9. Houser et al disclose that multiple security objects may be embedded in a single electronic document further suggesting that there may be at least one security object embedded on each page of a document (Col. 7, lines 60-65). Houser et al disclose wherein the user inputs variable data into a predetermined electronic form template and the data defining the electronic document comprises variable data and the pre-

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determined electronic form template. Houser et al disclose that the data captured includes data in an electronic document created using any conventional application, for example, Word for Windows, Amipro, Powerpoint, Excel, Microsoft Windows Paintbrush, among numerous others and that the document may be any type of document (Col. 7, lines 15-28; Col. 11, lines 52-61). Houser et al further disclose an example of an expense report using Excel that includes both variable data as well as a pre-determined electronic form template (Figure 7A-7B). Houser et al also disclose comparing a document digest component embedded in a security object associated with the document with a document digest stored in memory (Col. 16, lines 15-22), and further disclose that a watermark is generated based upon the document digest and included along with the document (Col. 16 line 55-Col. 17 line 14) however, fail to explicitly disclose generating a barcode from the document digest and including the barcode on the electronic document. Houser et al does disclose that the generated watermark may be a barcode or other glyph that includes the document digest (Col. 18 line 62-Col. 19 line 10).

10. Henderson et al disclose a system for validating value-bearing documents and further teach that it is known to generate a barcode based upon information such as a hash or digest of specific information and use the barcode in validating the Information after it has been received (paragraph 0046). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the system of Houser et al and include generating a barcode based upon a document hash or digest and associate or include the barcode along with the document to facilitate validation of

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the document when it is received by another party. Henderson et al provide motivation by indicating that converting the hash or digest information into barcode format expedites the validation procedure by a validation module (0046).

11. Houser et al also fail to explicitly disclose validating user-input variable data, however, examiner submits that validating user-input data was well known in the art at the time of applicant's invention. Millard et al, for example, provides a teaching related to validating user-input variable data (0150-0160) and further is concerned with protecting electronic documents using digital signatures to confirm document authenticity and to prevent subsequent alteration (0278-0279). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the methods of Houser et al and Henderson et al and include a step of validating any user-input data to ensure that it meets any preestablished rules as taught by Millard et al.

12. As per Claims 2 and 12 –

Houser et al further disclose wherein a unique document number is generated for said defined electronic document, said document number is stored with said captured data and said barcodes are generated from said document digest and said document number (Figure 913; Col. 4, lines 34-46; Col. 12, lines 45-54).

13. As per Claims 4 and 13 –

Houser et al fail to explicitly disclose wherein a unique document revision number is generated for said defined electronic document, said document revision number is stored with said captured data and said barcodes are generated from said document digest, said document number and said revision number. However, Houser et al does



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disclose that the content of the security object may vary depending on the information required by the features provided. The document digest may include document file name, document file path, the number of characters per page or in the document, the date and time that the document was saved as well as others (Col. 12, lines 40-54).

Although Houser et al fails to specifically disclose a document revision number, examiner submits that this would have been obvious to one having ordinary skill in the art at the time of applicant's invention.. It was well known that documents were frequently revised and included revision information in order to determine the current version of the document. Including this information in the document digest, or any other information related to the document would have been obvious to one having ordinary skill in the art in order to preserve this information when validating that the document was authentic.

14. iClaims 6-9 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houser et al, U.S. Patent No. 5,606,609 and Henderson et al, U.S. Patent Application Publication No. US 2002/0188845 A1 as applied above, and further in view of Adobe Acrobat 3.0 Tutorial, published 1996, hereinafter referred to as Adobe.

15. As per Claims 6 and 15 –

Henderson et al disclose converting a message into a bar code PDF format, however, Houser et al and Henderson et al fail to specifically disclose a document image generator for generating an electronic image of said barcoded defined electronic document, wherein said document forwarding component forwards said electronic image. Adobe discloses a document image generator for generating an electronic

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image (such as a PDF) of a defined electronic document (Pages 27, capturing and cataloging a PDF). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the system of Houser et al and Henderson et al and include the ability to generate a document image from the document in view of Adobe since this was a well known feature for conveniently transmitting electronic forms of documents from one party to another.

16. As per Claims 7 and 18 –

Houser et al disclose hand signatures (Figure 7E), however, fail to explicitly disclose wherein the received document has been hand signed and faxed by the user. However, examiner takes Official Notice that hand-signing and faxing documents was well known at the time of applicant's claimed invention and it would have been obvious to hand sign and fax a document in order to verify that somebody has approved the document or at least has read its contents signified by the signature.

17. As per Claims 8 and 16 –

Houser et al further disclose digital exchange key generator for generating a unique digital exchange key associated with said defined electronic document, said generated unique digital exchange key being generated by applying another secure algorithm to said electronic image, and forwarding said digital exchange key for storage (Col. 4, lines 10-33; Col. 7, lines 60-65; Col. 10, lines 60-65; Col. 12, lines 40-54; Col. 14, lines 10-20 and 30-35; Col. 15, lines 20-25; Col. 16, lines 15-22).

18. As per Claim 9 –

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Houser et al further disclose wherein said electronic document received by said document receiving component comprises a digital signature and said system further comprises a digital signature authentication component for authenticating said digital signature and a digital exchange key verification component for determining the validity of said received electronic document, wherein said digital exchange key verification component determines a digital exchange key by applying said secure algorithm to said received electronic document and comparing said determined digital exchange key to said stored unique digital exchange key associated with said defined electronic document (Col. 4, lines 10-33; Col. 7, lines 60-65; Col. 10, lines 60-65; Col. 12, lines 40-54; Col. 14, lines 10-20 and 30-35; Col. 15, lines 20-25; Col. 16, lines 15-22).

19. As per Claim 17 –

Houser et al further disclose whereby said electronic document received by said document receiving component comprises a digital signature, said method further comprising:

(a) authenticating said digital signature (Col. 7, lines 45-52; Col. 8, lines 8-12; Col. 12, lines 55-58; Col. 14, lines 43-46; Col. 15, lines 1-4 and 37-42; Col. 16, lines 30-34; Col. 21, lines 5-21); and,

(b) determining the validity of said received electronic document by applying said other secure algorithm to said received electronic document and comparing the resulting determined digital exchange key to said stored unique digital exchange key associated with said defined electronic document (Col. 4, lines 10-33; Col. 10, lines 60-65; Col. 12, lines 40-54; Col. 14, lines 10-20 and 30-35; Col. 15, lines 20-25; Col. 16, lines 15-22).

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20. Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the applicant, in preparing the responses, fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

**Conclusion**

21. The prior art previously made of record and not relied upon is considered pertinent to applicant's disclosure.

22. Zhao et al disclose digital authentication with analog documents and teach techniques for protecting the security of digital representations, and of analog forms made from them. Zhao teaches scanning analog forms and outputting to OCR software and generating a digest.

23. Smith discloses a method for authenticating documents and the originator or signer of the document.

24. Baxter discloses a method for collecting and authenticating electronic signatures and documents signed thereby using digests.

25. Poore et al disclose a transaction card and teach that it is known to store a message digest on a barcode.

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26. Kocher discloses a method for confirming, time stamping and archiving documents using FAX machines.

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

28. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cristina Owen Sherr whose telephone number is 571-272-6711. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

COS, 06/06/06

*John A. Smith*  
PRIMARY EXAMINER